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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,217	04/09/2007	John Mott	CASM127424	7405
26389 7590 08/18/2008 CHRISTENSEN, O'CONNOR, JOHNSON, KINDNESS, PLLC 1420 FIFTH AVENUE SUITE 2800 SEATTLE, WA 98101-2347				
EXAMINER HARP, WILLIAM RAY				
ART UNIT		PAPER NUMBER		
4174				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/576,217

Applicant(s)

MOTT, JOHN

Examiner

William R. Harp

Art Unit

4174

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-25 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 14 April 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-893)
4) ☐ Interview Summary (PTO-413)
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____
Paper No(s)/Mail Date 4/9/2007

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement (IDS) was submitted on April 9, 2007. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "5 [P6, L18]" and "8 [P6, L8]" have both been used to designate trays.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "5 [P7, L13]" and "6 [P7, L12]" have both been used to designate the outfeed conveyor.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "5" has been used to designate the outfeed elevator [P6, L5], trays [P6, L18], and the outfeed conveyor [P7, L13].

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "80 [P8, L17]" and "90 [P8, L25]" have both been used to designate tray inlet rails.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "90" has been used to designate both tray inlet rails [P8, L25] and a pick-up arrangement [P9, L5].

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 120 [P13, L10].

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 25 is objected to because of the following informalities: "wherein the steps of moving the products into is...with the steps" should read --wherein the step of moving the products into the station is...with the step--. There is only one step of moving the product into

the station and only one step of moving products of the station. Appropriate correction is required.

A series of singular dependent claims is permissible in which a dependent claim refers to a preceding claim which, in turn, refers to another preceding claim.

A claim which depends from a dependent claim should not be separated by any claim which does not also depend from said dependent claim. It should be kept in mind that a dependent claim may refer to any preceding independent claim. In general, applicant's sequence will not be changed. See MPEP § 608.01(n).

Claims 9 and 10 depend from Claim 6, yet Claims 7 and 8 do not depend from Claim 6. Further Claims 11-14 depend from Claim 8, yet Claims 9 and 10 do not depend from Claim 8. The claims should be renumbered to be more in line with the recommendations of the MPEP.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-7, 9-11, 13, 15, 17-19, 21-23, and 25 rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitt et al. (USPN 3719288) in view of Moeller (USPN 7201270).

Regarding Claims 1-7, 9, 10, 11, 13, 15, 17, 18, and 19, Schmitt et al. teaches an apparatus (Figure 1) for accumulating products, comprising: at least one station (angle members 14 form a rack which the examiner considers to be a station) where the products are to be accumulated; the station having an entry [C2, L66-67] for the products at one end and an exit [C3, L1-2] for the products at an opposite end; infeed means (infeed conveyor 28 and elevator 50) for conveying the products to the station entry; outfeed means (outfeed conveyor 170 and transfer means 174, which comprises an elevator, as illustrated in Figure 1) for conveying the products away from the station exit. The products are supported on pallets (22, which the examiner considers to be trays) which are slidably received angle members 14 and 17 [C2, L60-64]. The pallets are loaded onto the racks and if there are previously deposited pallets on the rack, the previously deposited pallets are pushed along the racks. If the rack is fully loaded and another pallet is loaded into the rack, then the pallet at the end of the rack is pushed off the rack [C5, L50-58]. The apparatus of Schmitt et al. has a plurality of stations arranged on a plurality of levels (Figure 1).

Schmitt et al. fails to teach a moving means for moving the products from the station entry into the station and for moving the products out of the station at the exit to the outfeed means, wherein the moving means is arranged to move one of the products into the station without simultaneously moving one of the products out of the station, so that the station can accumulate the products until the product is required to be removed from the station.

Moeller teaches an accumulating device for products (Figure 1). The device comprises containers (7, which are considered to be trays) which hold products (P). The containers are filled at entry port (4) where products are fed by belt (5). A vertical section (8a) raises the containers to a horizontal branch (8c) where the containers are moved horizontally by conveying means (42). The containers are moved by chains (43) that contact wings (20) on the sides of the containers, which the examiner considers to be a tray engagement means. Moeller further teaches the chains are motor-driven, which would comprise a drive means [C4, L51]. The containers are held at the end of horizontal section (8c) by arresting means (49). The containers are held independent of the movement of the chains [C5, L6-9] by idle rollers (46). The examiner considers the horizontal section of the device of Moeller to be a station for accumulating products and the chains (43) to be moving means for moving product from the entry of the station to the exit of the station. The moving means is capable of moving products into the station without moving products out of the station, therefore acting to accumulate products. The advantage of the device of Moeller is that the rate at which products enter the accumulation device can be different from the rate at which products leave the device [C7, L10-15]. The chains of Moeller work to move products into the station and out of the station; therefore the examiner considers them to be a common moving means.

It would have been obvious to one of ordinary skill to use the moving means of Moeller in the apparatus of Schmitt et al. in order to vary the rate at which products are moved into the station compared to the rate at which products are moved out of the station.

Regarding Claim 21, Schmitt et al. in view of Moeller teaches the limitations above. Moeller further teaches a tray accumulation and return means (illustrated as horizontal section 8d in Figure 1). The trays are held by arresting means (49a). The trays are held in while the trays in section 8a are being filled. A tray is released onto section 8a such that the pitch between the surfaces of the tray remains constant [C6, L18-33].

It would have been obvious to use a tray accumulation means to keep the tray pitch constant during the loading process.

Regarding Claims 22 and 23, Schmitt et al. in view of Moeller teaches the limitations above. Schmitt et al. further teaches a controller means (Figure 7). The controller means controls the hydraulic motors (104, 58, 160, 230, 184, and 206) and the hydraulic rams (148 and 222) of the system which are part of the infeed and outfeed means.

Moeller teaches a sensor (57) to detect the passage of the container [C5, L47-48].

While Schmitt et al. in view of Moeller fails to teach that the different parts are operated simultaneously; it would have been obvious to operate the different parts of the system simultaneously to increase the efficiency of the system.

Regarding Claim 25, Schmitt et al. in view of Moeller teaches the limitations above, yet fails to teach a method for accumulating products.

However, it would have been obvious that the combination of Schmitt et al. in view of Moeller would have performed in its normal and expected fashion to perform the claimed method.

Claims 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitt et al. in view of Moeller as applied to claim 7 above, and further in view of Fukuda et al. (EP 0242409 B1).

Regarding Claim 8, Schmitt et al. in view of Moeller teaches the limitations above, and Schmitt et al. further teaches that the pallets slide in the space between angle members (14, 17) as described above. The examiner considers this to mean that the pallets comprise slides.

Schmitt et al. in view of Moeller fails to teach the trays comprise wheels.

Fukuda et al. teaches a storage system which comprises trays (20) which have one end mounted to a chain (3). The trays have wheels (22, 23) mounted thereon.

One of ordinary skill were to replace the slides with wheels, the combination of Schmitt et al. in view of Moeller would continue in its normal and expected fashion. Therefore, since all the claimed elements were known in the art and one of ordinary skill could have combined them by known methods and achieved predictable results, it would have been obvious to one of ordinary skill to use wheels and/or slides on the trays. See MPEP 2143.02.

Claims 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitt et al. in view of Moeller as applied to claim 1 above, and further in view of Devins (USPN 4768646).

Regarding Claims 12 and 14, Schmitt et al. in view of Moeller teaches the limitations described above, however, fails to teach the tray are engaged at any one of a plurality of selected positions and the carrying means comprises a reciprocating beam system.

Devins teaches a reciprocating beam system (Figures 2A-2C). The system is used in an accumulating conveyor [C1, L5-6]. The system comprises pusher bars (22) that engage and move articles along the length of the conveyor. The examiner considers this to mean that the conveyor engages an article at any selected position.

One of ordinary skill would have found it obvious to use a reciprocating beam system to accumulate trays along a conveyor since all the claimed elements were known in the art and one of ordinary skill could have combined them by known methods and achieved predictable results. See MPEP 2143.02.

Claims 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitt et al. in view of Moeller as applied to claim 15 above, and further in view of Franke (USPN 5350050).

Regarding Claims 16 and 20, Schmitt et al. in view of Moeller teaches the limitations described above, and Schmitt et al. further teaches a pusher for pushing a pallet onto a rack [C5, L5-24].

Moeller further teaches a pusher (54) for pushing products onto an outlet belt (55) [C5, L29-32].

Schmitt et al. in view of Moeller fails to teach a pusher for pushing products onto a tray.

Franke teaches a pusher (45) for pushing a container off of the incoming conveyor onto the elevator [C3, L23-27]. Franke further teaches pushers (91-96) for pushing containers off of the elevator onto the belt conveyors (81-86). Franke further teaches a pusher (109) for pushing containers onto a discharge conveyor (7) [C3, L67-C4, L2].

The function of pushers is well-known in the art, and one of ordinary skill would have found it obvious to use a pusher to push products onto a tray or to push products onto an outfeed conveyor as are the common functions of the pusher.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitt et al. in view of Moeller as applied to claim 1 above, and further in view of Gram (USPN 5680923).

Regarding Claim 24, Schmitt et al. in view of Moeller teaches the limitations described above, yet fails to teach a refrigerator.

Gram teaches a storage facility for a freezer tunnel [C1, L6-8] (which the examiner considers a refrigerator) and teaches that this type of plant may be used as a buffer in a process line [C1, L28-29].

One of ordinary skill would have found it obvious that the combination of Schmitt et al. in view of Moeller would operate in its normal and expected fashion inside a refrigerator. The combination would continue to act as a buffer, as a buffer is used to accumulate products.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USPN 4787803 to van Elten et al. is directed to a storage unit. USPN 533982 to Tanizawa et al. is directed to a cargo transport system in an automated warehouse. USPN 5320210 to Van Den Bergh et al. is directed to a conveying and storage means utilizing trays. USPN 4509893 to Nashimoto et al. is directed to a device for storing and retrieving articles from a rack.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William R. Harp whose telephone number is (571) 270-5386. The examiner can normally be reached on Monday - Thursday, 8:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly D. Nguyen can be reached on (571) 272-2402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/W. R. H./
Examiner, Art Unit 4174

/Jacob Y Choi/
Primary Examiner, Art Unit 2885